

APPLICATION FOR
UNITED STATES LETTERS PATENT
SPECIFICATION

INVENTOR(s): Denny Ho

Title of the Invention: SALES PROMOTION CONTROLLING SYSTEM
BASED ON DIRECT MAIL, SERVER THEREOF,
METHOD THEREOF, AND COMPUTER READABLE
RECORD MEDIUM THEREOF

09749380.122800

SALES PROMOTION CONTROLLING SYSTEM BASED ON DIRECT
MAIL, SERVER THEREOF, METHOD THEREOF, AND COMPUTER
READABLE RECORD MEDIUM THEREOF

5 **Background of the Invention**

Field of the Invention

 The present invention relates to a sales
promotion technology using direct mail in a POS
(Point Of Sales) system, an online shopping system,
10 or the like

Description of the Related Art

 In a conventional POS system and a
conventional online shopping system, direct mail
15 (hereinafter referred to as DM) is issued to
prospective customers so as to inform them of
bargain information and event information and
perform sales promotion.

 In recent years, as Internet technologies and
20 electronic mail using these technologies are
rapidly becoming common, mediums of DM are being
changed from paper (such as postcards and sealed
letters) to electronic mail.

 However, in a conventional DM method, it is
25 difficult to determine whether or not a customer

09749380 122800

who visited a store had read the DM. Thus, it is difficult to accurately analyze the effect of the DM.

As a result, conventionally, it is necessary
5 to assign especially large amount of money to DM.

Summary of the Invention

An object of the present invention is to achieve a sufficient effect of sales promotion in such a manner that it is determined whether or not
10 a customer opened the DM, that a special benefit is offered to only a customer who opened the DM, and that it is determined that only when a customer had opened the DM and purchased commodities advertised
15 therein in a designated period, the DM was collected.

The present invention is a sales promotion controlling system based on direct mail issued using online communicating means corresponding to
20 an Internet technology.

A browsing determining device (DM open information managing unit) determines whether or not issued direct mail was browsed.

A sales promotion controlling device (customer
25 master managing unit, offer information managing

09749380 122800

unit, transaction information managing unit) controls sales promotion activities for commodities advertised by the direct mail corresponding to the determined result.

5 The sales promotion controlling device is a sever device (FSP server device, POS server device) for use with a point-of-sales (POS) information managing system or an online shopping system and controls an assignment state of a benefit to a
10 commodity purchasing activity by a recipient of the direct mail on the POS information managing system or the online shopping system.

 The sales promotion controlling device is a sever device for use with a point-of-sales (POS)
15 information managing system or an online shopping system and analyzes an effect of the issuance of the direct mail corresponding to the determined result of the browsing determining device and a transaction history of commodities on the POS
20 information managing system or the online shopping system.

 The sales promotion controlling device controls the issuance state of the direct mail corresponding to the determined result of the
25 browsing determining device.

09749380-122800

The direct mail is issued as electronic mail with a direct mail open acknowledge message request option. The browsing determining device determines whether or not the issued direct mail was browsed
5 corresponding to the direct mail open acknowledge message returned from the recipient of the electronic mail.

The direct mail is issued using a sales promotion homepage. The browsing determining device
10 determines whether or not the issued direct mail was browsed corresponding to a returned result of a form provided on the sales promotion homepage returned by a customer who browsed the sales promotion homepage.

The present invention can be accomplished as a server that stores the transmission and reception states of direct mail, commodity information, and customer information to a storing means or as a processing means for performing a process for
15 providing a service corresponding to a content stored in a storing means.
20

In addition, the present invention can be accomplished as an invention of a method for providing the same function as that provided by the
25 above-described system.

09749380.122800

Moreover, the present invention can be accomplished as a computer readable record medium that causes a computer to perform the same function as that accomplished by the structure of the above-described system.

Brief Description of Drawings

The features and advantages of the present invention will be more clearly appreciated from the following description taken in conjunction with the accompanying drawings in which like elements are denoted by a like reference numeral and in which:

Fig. 1 is a schematic diagram showing the overall structure of a system according to an embodiment of the present invention;

Fig. 2 is a schematic diagram for explaining the theory of operation of the embodiment of the present invention;

Fig. 3 is a schematic diagram showing functions of an FSP server device and a POS server device;

Fig. 4 is a schematic diagram showing the structure of a user interface of the FSP server device;

Fig. 5 is a flow chart showing the operation

09749380-122800

of a POS sales registering process;

Fig. 6A is a schematic diagram showing discrimination of customers;

Fig. 6B is a schematic diagram showing the relation between a DM browsed customer counting system (present invention) and a non-counting system;

Fig. 7 is a block diagram showing the structure of an information processing unit; and

Fig. 8 is a schematic diagram for explaining a computer readable record medium and a transfer signal that allow programs and data to be supplied to the information processing unit.

15 Description of Preferred Embodiment

Next, with reference to the accompanying drawings, an embodiment of the present invention will be described. Fig. 1 is a schematic diagram showing the structure of a system according to the embodiment of the present invention.

The embodiment of the present invention is accomplished as a POS system connected through a network 103 composed of an ISDN (Integrated Services Digital Network) line, a leased line, or the like. The POS system is composed of a main

09749380.122800

center 101 and a plurality of stores 102.

In the main center 101, an FSP server device 104 and a DM mail server device 105 are disposed.

5 The FSP server device 104 is a server computer that controls all sales promotion activities on the POS system.

10 The DM mail server device 105 is a server computer that controls the transmission and reception of electronic mail of DM to and from customers corresponding to commands issued from the FSP server device 104.

In each store 102, a POS server device 106, a POS register terminal device 107, and a workstation terminal device 108 are disposed.

15 The POS server device 106 is a server computer that controls point-of-sales information at the store 102 while communicating with the FSP server device 104 of the main center 101 through the network 103.

20 The POS register terminal device 107 has a cash register. The POS register terminal device 107 is a terminal unit that, for example, inputs commodity sales and outputs receipts while communicating with the POS server device 106.

25 The workstation terminal device 108 is a

09749380.122800

terminal unit that, for example, inquires about point-of-sales information, such as a sales summary, while communicating with the FSP server device 104 of the main center 101 through the network 103.

5 Fig. 2 is a schematic diagram for explaining the theory of operation of the embodiment of the present invention.

 The FSP server device 104 shown in Fig. 1 has a function for setting a benefit and an event for sales promotion of commodities (at step 201 shown in Fig. 2).

 The FSP server device 104 has a function for setting DM transmission information to each registered customer (at step 202 shown in Fig. 2).
15 The FSP server device 104 causes the DM mail server device 105 (see Fig. 1) to transmit DM as electronic mail corresponding to the transmission information (at step 203 shown in Fig. 2).

 Thus, the DM mail server device 105 transmits
20 the DM as electronic mail to each registered customer (at step 204 shown in Fig. 2). At the point, a DM open acknowledge message request option is added to the DM that is transmitted.

 As a result, when each customer opens the DM,
25 the mail server device on the receiving side

09749380 122800 000221 08554750

notifies the DM mail server device 105 of a DM open acknowledge message as electronic mail that indicates that the relevant customer opened the DM (at step 205 shown in Fig. 2).

5 When the DM mail server device 105 receives the message, the DM mail server device 105 notifies the FSP server device 104 of the reception of the DM open acknowledge message. As a result, the FSP server device 104 executes a DM open notification
10 updating process (at step 206 shown in Fig. 2) and stores DM open information for each customer from whom the FSP server device 104 received the DM open acknowledge message (at step 207 shown in Fig. 2).

 In such a manner, whenever the FSP server
15 device 104 of the main center 101 issues DM, the FSP server device 104 can know whether or not each customer browsed the DM. Thus, sales promotion activities for commodities advertised in the DM can be finely executed.

20 In reality, the FSP server device 104 sets a special benefit to only customers who browsed the DM so as to perform sales promotion for commodities at each store (at step 208 shown in Fig. 2).

 When commodity sales take place in the POS
25 register terminal device 107 of the store 102 (see

09749380 122800

Fig. 1) and the POS server device 106 executes a POS sales registering process, the POS register terminal device 107 references the DM open information stored in the FSP server device 104 through the POS server device 106 and the network 103 (see Fig. 1) with a key of a customer number that is input from the POS register terminal device 107 (at step 209 shown in Fig. 2). At the point, when the customer corresponding to the input customer number browsed the DM, the POS register terminal device 107 further references benefit setup information stored in the FSP server device 104 (at step 208 shown in Fig. 2). As a result, the POS register terminal device 107 performs a special discount or gives a special sales promotion point to the customer. In such a manner, the DM can effectively motivate customers to visit the store.

On the other hand, the FSP server device 104 executes a DM evaluating process (at step 211 shown in Fig. 2) based on transaction information (at step 210 shown in Fig. 2) stored in the POS sales registering process performed by the POS server device 106 and the DM open information (at step 207 shown in Fig. 2) and calculates a DM evaluation table (at step 212 shown in Fig. 2). As a result,

09749380-122800

the FSP server device 104 can accurately analyze the effect of the DM. In other words, the FSP server device 104 can perform a DM issuing process that maximizes the effect and minimizes the cost.

5 Fig. 3 is a schematic diagram showing functions of the FSP server device 104 in the main center 101 and the POS server device 106 in the store 102 of the system shown in Fig. 1 according to the present invention.

10 The FSP server device 104 comprises a DM recipient transmission information managing unit 310, a DM open information managing unit 302, a customer master managing unit 303, and an offer information managing unit 304.

15 The DM recipient transmission information managing unit 301 manages, for example, the registration, reference, update and deletion of DM recipient transmission information which is transmission information of DM for each DM recipient, and DM transmission indication, etc (at
20 step 202 shown in Fig. 2). The DM recipient transmission information of each DM recipient is composed of a name and an electronic mail address referenced from a customer master managed by the
25 customer master managing unit 303 and event

information that is a content of the DM. The DM recipient transmission information managing unit 301 causes the DM mail server device 105 to transmit the DM as electronic mail based on the DM recipient transmission information (at step 203 shown in Fig. 2).

The DM open information managing unit 302 executes the above-described DM open notification updating process based on the reception notification of the DM open acknowledge message received from the DM mail server device 105 (at step 206 shown in Fig. 2) and stores the electronic mail address of the customer contained in the DM open acknowledge message as the DM open information (at step 207 shown in Fig. 2) for each customer from whom the DM open acknowledge message was received. The DM open information managing unit 302 sends DM open information corresponding to an inquiry from the POS server device 106 (see Fig. 1) of the store 102.

The customer master managing unit 303 manages ,for example, the registration, reference, update, and deletion of the customer master as a customer information database. The customer master contains card information (a card type for example

09749380 122300

credit card, point card, store card, or the like)
and a card number, customer personal information (a
name, an address, and a telephone number), a
customer rank (a rank of each customer categorized
5 corresponding to a predetermined criterion), an
electronic mail address, a DM recipient code
(representing whether or not each customer is a DM
recipient), a DM browsing code (representing
whether or not each customer browsed DM
10 corresponding to DM open information), a point
balance (a sales promotion point given whenever
each customer purchased one or more commodities),
and so forth for each customer. The customer master
is used for a customer purchased commodity
15 analyzing process, a sales promotion point managing
process, a DM/news transmitting process, and so
forth.

The offer information managing unit 304
manages the registration, reference, update, and
20 deletion of offer information as benefit and event
information for sales promotion for commodities for
each customer ranks. In addition, the offer
information managing unit 304 sends relevant offer
information corresponding to an inquiry from the
25 POS server device 106 (see Fig. 1) of the store 102

09749380.122800

(at step 209 shown in Fig. 2). The offer information contains a promotion period, recipients (customer rank), a price, a reduction rate, a discount rate, a commodity code setup value, a sales promotion point acquirement criterion setup value, a coupon issuance criterion, a benefit refund commodity code setup value, and so forth.

The POS server device 106 (see Fig. 1) in the store 102 comprises a transaction information managing unit 305, a bargain information managing unit 306, and a commodity information managing unit 307.

The transaction information managing unit 305 executes a POS sales registering process for managing and storing transaction information generated by the POS register terminal device 107 of the store 102 (see Fig. 1) based on the sales of commodities (at step 209 shown in Fig. 2). The transaction information contains a date of transaction, a transaction sequence number, a commodity code, a unit price, a quantity, a due amount, an amount of payment, a customer number, an acquired point, and so forth. When the transaction information managing unit 305 executes the above-described POS sales registering process, the

09749380.122600

transaction information managing unit 305 inquires the DM open information managing unit 302 of the FSP server device 104 about whether or not the customer browsed the DM with a key of the customer number that is input from the POS register terminal device 107. In addition, the transaction information managing unit 305 inquires the customer master managing unit 303 and the offer information managing unit 304 in the FSP server device 104 about whether or not the customer is a DM recipient and about offer information such as unit price and point acquirement criterion with keys of the customer number and the commodity code that are input from the POS register terminal device 107. Moreover, the transaction information managing unit 305 references bargain information stored in the bargain information managing unit 306 and decides the unit price and acquired point of the transaction information that is stored. In addition, the transaction information managing unit 305 causes the POS register terminal device 107 to output a receipt.

The bargain information managing unit 306 manages, for example, the registration, reference, update, and deletion of valid date/time of bargain

09749380 122800

commodities, a commodity code, a unit price, and so forth as bargain information.

The commodity information managing unit 307 manages, for example, a commodity code, a sales unit price, a purchased unit price, a margin ratio, a supplier code, a department code, and so forth as commodity information necessary for POS management.

Fig. 4 is a schematic diagram showing the structure of a user interface of the FSP server device 104 in the main center 101.

A customer information inputting function 401 is a function for registering customer information of a new customer to the customer master managed by the customer master managing unit 303 shown in Fig. 3. The customer information inputting function 401 is accomplished as a function for allowing a terminal unit (not shown) in the main center 101 to access the FSP server device 104.

A DM transmission requesting function 402 is accomplished as a function of the DM recipient transmission information managing unit 301 shown in Fig. 3. The DM transmission requesting function 402 is a function for causing the DM mail server device 105 to transmit DM as electronic mail.

A DM browsed notification receiving function

09749380 122800
009221 08E64760

403 is accomplished as a function of the DM open information managing unit 302 shown in Fig. 3. The DM browsed notification receiving function 403 is a function for storing an electronic mail address of a customer contained in the DM open acknowledge message received from the DM mail server device 105.

An offer information setting function 404 is accomplished as a function of the offer information managing unit 304 shown in Fig. 3. The offer information setting function 404 is a function for setting offer information as benefit and event information for sales promotion of commodities corresponding to customer ranks.

An offer information replying function 405 is accomplished as a function of the offer information managing unit 304 shown in Fig. 3. The offer information replying function 405 is a function for sending relevant offer information to an inquiry from the POS server device 106 (see Fig. 1) of the store 102.

A purchased commodity information collecting function 406 is a function for collecting transaction information managed by the transaction information managing unit 305 from the POS server device 106 of the store 102.

09749380 122800

An acquired point and point refund function 407 is a function for collecting an acquired point contained in the transaction information managed by the transaction information managing unit 305 from the POS server device 106 of the store 102 and reflecting the acquired point to the point balance contained in the customer master managed by the customer master managing unit 303 shown in Fig. 3.

A help desk function 408 is a function for correcting relevant customer information of the customer master managed by the customer master managing unit 303 shown in Fig. 3, correcting point information, transferring current point information to other point information, and collating customer information corresponding to a request from a customer.

A customer purchased commodity analyzing function 409 is a function for executing a customer purchased commodity analyzing process based on information collected by the purchased commodity information collecting function 406 and customer information of the customer master managed by the customer master managing unit 303. In reality, the customer purchased commodity analyzing function 409 is a function for tracking a purchase situation,

009749380 122600

summing customer categories, extracting customer information about a particular customer, and issuing various summary reports.

Fig. 5 is a flow chart showing the POS sales registering process executed by the transaction information managing unit 305 of the POS server device 106 upon an occurrence of commodity sales in the POS register terminal device 107 of the store 102 (see Fig. 1) corresponding to the present invention.

First of all, the POS server device 106 obtains a customer number, a commodity code, and a transaction date from the POS register terminal device 107 (at step 501 shown in Fig. 5).

Thereafter, the POS server device 106 references bargain information stored in the transaction information managing unit 305 with a key of the obtained commodity code and determines whether or not commodities corresponding to the commodity code are promotion (bargain) commodities (at step 502 shown in Fig. 5).

When the POS server device 106 has determined that the commodities corresponding to the obtained commodity code are not the promotion commodities (namely, the determined result at step 502 shown in

09749380-122800

Fig. 5 is No), the POS server device 106 sets the sales price to the regular price, stores it as transaction information, and causes the POS register terminal device 107 to output a receipt (at step 503 shown in Fig. 5).

On the other hand, when the POS server device 106 has determined that the commodities corresponding to the obtained commodity code are promotion commodities (namely, the determined result at step 502 shown in Fig. 5 is Yes), the POS server device 106 inquires the customer master managing unit 303 of the FSP server device 104 with a key of the obtained customer number and determines whether the customer corresponding to the customer number is a DM recipient (at step 504 shown in Fig. 5).

When the POS server device 106 has determined that the customer corresponding to the customer code is not a DM recipient (namely, the determined result at step 504 is No), the POS server device 106 sets the sales price to the regular promotion sales price, stores it as transaction information, and causes the POS register terminal device 107 to output a receipt (at step 508 shown in Fig. 5).

When the POS server device 106 has determined

09749380 122800

that the customer corresponding to the customer number is a DM recipient (namely, the determined result at step 504 is Yes), the POS server device 106 inquires the DM open information managing unit 5 302 of the FSP server device 104 with a key of the obtained customer number and determines whether or not the customer corresponding to the customer number is a DM recipient who browsed the DM (hereinafter referred to as DM browser) (at step 10 505 shown in Fig. 5).

When the POS server device 106 has determined that the customer corresponding to the customer number is not a DM browser (namely, the determined result at step S505 is No), the POS server device 15 106 sets the sales price to a DM recipient non-browser price, stores it as transaction information, and causes the POS register terminal device 107 to output a receipt (at step 507 shown in Fig. 5).

When the POS server device 106 has determined 20 that the customer corresponding to the customer number is a DM browser (namely, the determined result at step 505 is Yes), the POS server device 106 sets the sales price to a DM recipient browser price, stores it as transaction information, and 25 causes the POS register terminal device 107 to

09749380 122800

output a receipt (at step 507 shown in Fig. 5).

Next, with reference to Figs. 6A and 6B, an operation of the embodiment of the present invention will be described. Fig. 6A shows an example of discrimination of customers. Fig. 6B shows the relation between a DM browsed customer (browser) counting system (present invention) and a non-counting system.

Now, it is assumed that there are four customers A, B, C, and D.

- Customer A: Non DM recipient, with purchase in promotion period

- Customer B: DM recipient (non-browser), with purchase in promotion period

- Customer C: DM recipient (browser), with purchase in promotion period

- Customer D: DM recipient, without purchase in promotion period

In that case, as shown in Fig. 6A, it is assumed that the customers are discriminated in such a manner that the regular price in a non promotion period = ¥ 100; the non DM recipient price in a promotion period = ¥ 98 (customer A); the DM recipient, non-browser price = ¥ 95 (customer B); and the DM recipient, browser price =

09749380.122800

¥ 90 (customer C).

Fig. 6B shows the relation between the DM browsed customer (browser) counting system and the non-counting system. As shown in Fig. 6B, according to the embodiment of the present invention, information of the number of DM browsers, DM browser ratio (number of DM browsers / number of DM recipients), and number of browsers who purchased commodities can be obtained unlike with the non-counting system. In the non-counting system, the DM collection ratio is calculated as (number of DM recipients who purchased commodities / number of DM recipients). However, according to the present invention, the DM collection ratio can be calculated as (number of browsers who have browsed DM and purchased commodities / number of DM browsers).

As described above, according to the embodiment of the present invention, the effect of DM can be accurately analyzed. Thus, the DM issuing process that minimizes the necessary cost and maximizes the effect can be performed.

According to the embodiment of the present invention, as shown in Fig. 1, the main center 101 and the plurality of stores 102 are connected as a

09749380.122800

POS system through the network 103 composed of an ISDN line or a leased line. However, it should be noted that the present invention is not limited to such an example. In other words, the POS server device 106 shown in Fig. 1 can be substituted with a WWW (World Wide Web) server device. The FSP server device 104 and the WWW server device can be connected by a LAN (Local Area Network) or a leased line. The WWW server device can provide an online shopping mall to customers through the Internet. In that case, when the WWW server device receives an order, the WWW server device inquires the FSP server device about DM transmission and DM browsing states and so forth. The WWW server device can decide commodity prices (or discount prices) or give sales promotion points corresponding to the DM transmission and DM browsing states.

In the above-described embodiment, DM is transmitted as electronic mail with a DM open acknowledge message request option. According to the DM open acknowledge message sent back from the recipient of the DM, it is determined whether the recipient browsed the DM. However, it should be noted that the present invention is not limited to such an example. In the case that DM is issued

09749380.122800

5

10

15

25

to an appropriate communication protocol. When necessary, the network connecting device 707 receives the above-described programs and data from an external device and loads them to the memory 702.

5 Fig. 8 shows a computer readable record medium and a transfer signal that allow programs and data to be supplied to the information processing device 700 shown in Fig. 7.

10 Alternatively, the present invention can be accomplished as a computer readable record medium 709 that allows a computer to perform the same functions as those accomplished by the individual structural units of the embodiment of the present invention.

15 A program that causes a computer to perform the same processes as those performed by the individual devices of the embodiment may be pre-stored to the computer readable record medium 709. As shown in Fig. 8, the program is read from the
20 record medium 709 to the computer 700 (for example, the FSP server device 104 or the POS server device 106) and temporarily stored to the memory 702 or the external storing device 705 of the computer 700.

25 The stored program is read and executed by the CPU 701 of the computer 700.

09749380-122800

008221" 08E67460

5 A transfer signal of a program transferred through a line 801 (transmission medium) from a program (data) provider 800 to the computer 700 allows a general-purpose computer to perform the same functions as the individual devices of the embodiment of the present invention.

According to the present invention, it can be securely determined whether or not a customer opened direct mail.

10 Thus, a special benefic can be given to only a customer who opened direct mail.

In addition, only for a customer who purchased commodities in a designated period and opened direct mail, it can be determined that direct main transmitted thereto was collected.

15 Thus, according to the present invention, sufficient effects of sales promotion can be accomplished. As a result, sales promotion activities can be delicately performed for commodities advertised by direct mail.

20 More practically, direct mail effectively motivates a customer to visit a shop.

In addition, according to the present invention, since direct mail is evaluated corresponding to transaction information (of POS

25

sales and online shopping sales) and direct mail
open acknowledge information, the direct mail is
evaluated. Thus, the effects of the direct mail can
be accurately analyzed. Thus, a direct mail issuing
5 process that minimizes the required cost and
maximizes the effects can be performed.

While the invention has been described with
reference to the preferred embodiments thereof,
various modifications and changes may be made to
10 those skilled in the art without departing from the
true spirit and scope of the invention as defined
by the claims thereof.

00822T 08E6H60
09749380 122800